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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,956	09/30/2003	Tsutomu Saitou	1715028	5323

24240 7590 02/21/2006

CHAPMAN AND CUTLER
111 WEST MONROE STREET
CHICAGO, IL 60603

EXAMINER

WONG, ERIC K

ART UNIT	PAPER NUMBER
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2883

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,956

Applicant(s)

SAITOU, TSUTOMU

Examiner

Eric Wong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in the reply filed on 11/29/2005 is acknowledged. Claims 24-25 have been withdrawn from consideration.

Response to Arguments

2. Applicant's arguments filed 8/19/2005 have been fully considered but they are not persuasive. Applicant argues that the prior art of Lean et al. discloses an angle formed between the optical fiber and that of a thin film waveguide to be only 45 degrees and that the prior art does not meet the claimed limitations. Examiner respectfully disagrees. The claimed invention recites a limitation requiring that the angle formed between an output direction of light and the input direction of light to be 90 degrees. As shown in figure 1 of Lean et al., the angle formed between the **direction of input and output light** is in fact 90 degrees as claimed. It appears that the prior art meets the limitations as currently claimed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-7, and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent Number 3,791,715 to Lean et al.

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As to claims 1, 6, and 14-15, Lean et al. discloses in figures 1 and 2, an optical waveguide element having a substrate (10) which has an electro-optic effect (24) and an optical waveguide formed on the substrate (12), comprising:

- A reflective means formed on a side of the substrate where an end of the optical waveguide is positioned (22); and
- An optical fiber connected to the substrate which is placed apart from the optical waveguide, wherein light waves that propagate between the reflective means and the optical fiber propagate within the substrate excluding the optical waveguide (figure 1);
- Wherein an angle formed between the output direction of the light wave from the input optical fiber and an input direction of the light wave to the optical waveguide is set at 90 degrees (optical axis follows the arrowed lines which are respective to a 90 degree angle).

As to claim 2, the optical fiber is connected to a side opposite from where the reflective means is positioned.

As to claims 6-7, the input and output waveguides are connected to a bottom portion of the substrate.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lean et al. as applied to claim 1 above, and further in view of United States Patent Number 3,905,676 to Ulrich.

Lean et al. discloses an optical waveguide device having a substrate and reflective means, but fails to explicitly disclose a reflective film. It is noted that reflective films are commonly used in the optical communication art.

Ulrich discloses an optical waveguide device having a substrate and reflective means including the use of a reflective film.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reflective film of Ulrich as the reflective means in Lean et al. in order to properly reflect light at different phases for the motivation that since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

7. Claims 3-4, 8-10 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lean et al. as applied to claim 1 above.

Lean et al. discloses an optical waveguide device with a substrate, reflective means, and a prism that reflects light at certain angles (column 3, line 1), however, Lean et al. fails to explicitly disclose the specific limitations as claimed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the reflection angles as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable

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range involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (Also see MPEP 2131.03 III).

Examiner's contention of these obvious choices in design can be overcome if applicant establishes unexpected results by arranging the components to produce the angles as claimed.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.

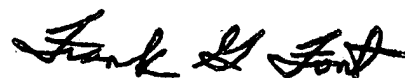
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EW



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800